

S/N Unknown

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Kie Y. Ahn et al.	Examiner:	Unknown
Serial No.:	Unknown	Group Art Unit:	Unknown
Filed:	Herewith	Docket:	303.686US3
Title:	MULTILEVEL COPPER INTERCONNECTS WITH LOW-K DIELECTRICS AND AIR GAPS		

INFORMATION DISCLOSURE STATEMENT

MS Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement.

Pursuant to 37 C.F.R. §1.98(d), copies of the listed documents are not provided as these references were previously cited by or submitted to the U.S. Patent Office in connection with Applicants' prior U.S. application, Serial No. 10/093244, filed on March 06, 2002, which is relied upon for an earlier filing date under 35 U.S.C. §120.

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

KIE Y. AHN ET AL.

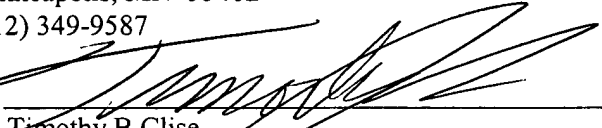
By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
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Date

25 Feb '04

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Date of Deposit: February 25, 2004

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 1 of 13	Attorney Docket No: 303.686US3	

US PATENT DOCUMENTS						
Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
	US20010054771	12/27/2001	Wark, J. M., et al.			
	US20020014646	02/07/2002	Tsu, , et al.	257	296	
	US20020028552	03/07/2002	Lee, , et al.	438	243	
	US20020096768	07/25/2002	Joshi, Rajiv Vasant	257	750	
	US-3,337,334	08/22/1967	Fenn, R. W., et al.	75	150	12/06/1963
	US-3,548,915	10/22/1970	Richmond, W. J., et al.	164	68	06/11/1969
	US-3,832,456	08/27/1974	Kobetz, Paul , et al.	423	645	10/18/1962
	US-3,923,500	12/02/1975	Kitazawa, Kunio , et al.	75	156.5	09/04/1974
	US-3,932,226	01/13/1976	Klatskin, J. B., et al.	204	16	12/06/1974
	US-3,954,570	06/04/1976	Shirk, Albert , et al.	204	15	11/11/1974
	US-4,022,931	05/10/1977	Black, J. , et al.	427	91	06/13/1975
	US-4,029,377	06/14/1977	Guglielmi, A. C.	339	19	02/03/1976
	US-4,065,330	12/27/1977	Masumoto, Hakaru , et al.	148	31.55	02/22/1977
	US-4,101,855	07/18/1978	Drapeau, Donald R.	335	106	11/05/1976
	US-4,158,719	06/19/1979	Frantz, E.	428	567	06/09/1977
	US-4,233,066	11/11/1980	Sundin, Anders O., et al.	75	142	08/14/1975
	US-4,314,594	02/09/1982	Pfeifer, Friedrich , et al.	148	108	04/29/1980
	US-4,386,116	05/31/1983	Nair, Krishna K., et al.	427	99	12/24/1981
	US-4,389,429	06/21/1983	Soclof, Sidney I.	438	492	06/28/1982
	US-4,394,223	07/19/1983	Hall, Dean	204	15	10/06/1981
	US-4,423,547	01/03/1984	Farrar, P. A., et al.	29	571	06/01/1981
	US-4,561,173	12/31/1985	Te Velde, T. S.	438	619	06/07/1983
	US-4,565,157	01/21/1986	Brors, D. L., et al.	118	719	03/29/1983
	US-4,574,095	03/04/1986	Baum, Thomas H., et al.	427	53.1	11/19/1984
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	US-4,709,359	11/24/1987	Loftin, Rayford A.	367	155	06/28/1982
	US-4,762,728	08/09/1988	Keyser, T. , et al.	427	38	11/26/1985
	US-4,788,082	11/29/1988	Schmitt, Jerome J.	427	248.1	12/12/1985
	US-4,847,111	07/11/1989	Chow, Yu C., et al.	427	38	06/30/1988
	US-4,857,481	08/15/1989	Tam, G. , et al.	437	182	03/14/1989
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DATE CONSIDERED

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 2px;"><i>Complete if Known</i></td> </tr> <tr> <td style="width: 60%; padding: 2px;">Application Number</td> <td style="padding: 2px;">Unknown</td> </tr> <tr> <td style="padding: 2px;">Filing Date</td> <td style="padding: 2px;">Even Date Herewith</td> </tr> <tr> <td style="padding: 2px;">First Named Inventor</td> <td style="padding: 2px;">Ahn, Kie</td> </tr> <tr> <td style="padding: 2px;">Group Art Unit</td> <td style="padding: 2px;">Unknown</td> </tr> <tr> <td style="padding: 2px;">Examiner Name</td> <td style="padding: 2px;">Unknown</td> </tr> </table>	<i>Complete if Known</i>		Application Number	Unknown	Filing Date	Even Date Herewith	First Named Inventor	Ahn, Kie	Group Art Unit	Unknown	Examiner Name	Unknown
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Application Number	Unknown												
Filing Date	Even Date Herewith												
First Named Inventor	Ahn, Kie												
Group Art Unit	Unknown												
Examiner Name	Unknown												
Sheet 2 of 13	Attorney Docket No: 303.686US3												

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	US-4,962,058	10/09/1990	Cronin, John E., et al.	437	187	04/14/1989
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	US-5,034,799	07/23/1991	Tomita, K. , et al.	357	71	02/14/1990
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	US-5,084,412	01/28/1992	Nakasaki, Yasushi	437	189	10/01/1990
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	US-5,130,274	07/14/1992	Harper, J. M., et al.	437	195	04/05/1991
	US-5,148,260	09/15/1992	Inoue, T. , et al.	357	67	09/07/1990
	US-5,149,615	09/22/1992	Chakravorty, K. K., et al.	430	313	01/08/1991
	US-5,158,986	10/27/1992	Cha, S. W., et al.	521	82	04/05/1991
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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 3 of 13	Attorney Docket No: 303.686US3	

	US-5,442,237	08/15/1995	Hughes, Henry G., et al.	257	759	02/04/1994
	US-5,444,015	08/22/1995	Aitken, John M., et al.	437	182	04/11/1994
	US-5,447,887	09/05/1995	Filipiak, Stanley , et al.	437	200	04/01/1994
	US-5,457,344	10/10/1995	Bartelink, Dirk J.	257	737	03/25/1994
	US-5,470,789	11/28/1995	Misawa, N.	437	190	03/07/1995
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	US-5,476,817	12/19/1995	Numata, K.	437	195	05/31/1994
	US-5,485,037	01/16/1996	Marrs, R. C.	257	712	03/27/1995
	US-5,495,667	03/05/1996	Farnworth, Warren M., et al.	29	843	11/07/1994
	US-5,506,449	04/09/1996	Nakano, Tadashi , et al.	257	758	03/23/1994
	US-5,510,645	04/23/1996	Fitch, J. T., et al.	257	522	01/17/1995
	US-5,529,956	06/25/1996	Morishita, Y.	437	195	09/28/1994
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	US-5,538,922	07/23/1996	Cooper, K J., et al.	437	195	01/25/1995
	US-5,539,060	07/23/1996	Tsunogae, Y. , et al.	525	338	10/13/1995
	US-5,539,227	07/23/1996	Nakano, H.	257	276	08/02/1995
	US-5,578,146	11/26/1996	Grant, L. A., et al.	148	437	01/16/1996
	US-5,595,937	01/21/1997	Mikagi, K.	437	192	04/12/1996
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	US-5,625,232	04/29/1997	Numata, K. , et al.	257	758	07/15/1994
	US-5,635,253	06/03/1997	Canaperi, Donald F., et al.	427	437	06/07/1995
	US-5,654,245	08/05/1997	Allen, Gregory L.	438	629	03/23/1993
	US-5,662,788	09/02/1997	Sandhu, G. , et al.	205	87	06/03/1996
	US-5,667,600	09/16/1997	Grensing, Fritz C., et al.	148	437	03/31/1994
	US-5,670,420	09/23/1997	Choi, Kyeong K.	437	189	11/08/1995
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	US-5,679,608	10/21/1997	Cheung, Robin W., et al.	437	195	06/05/1995
	US-5,681,441	10/28/1997	Svendsen, Leo G., et al.	205	114	12/22/1992
	US-5,695,810	12/09/1997	Dubin, Valery M., et al.	427	96	11/20/1996
	US-5,705,425	01/06/1998	Miura, T. , et al.	437	182	04/26/1996
	US-5,719,089	02/17/1998	Cherng, Meng-Jaw , et al.	438	637	06/21/1996
	US-5,719,410	02/17/1998	Suehiro, S. , et al.	257	77	12/16/1996

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	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 4 of 13	Attorney Docket No: 303.686US3	

	US-5,725,689	03/10/1998	Nishida, S. , et al.	148	320	10/05/1995
	US-5,739,579	04/14/1998	Chiang, Chien , et al.	257	635	09/10/1996
	US-5,763,953	06/09/1998	Iijima, T. , et al.	257	762	01/18/1996
	US-5,780,358	07/14/1998	Zhou, M. S.	438	645	04/08/1996
	US-5,785,570	07/28/1998	Bruni, M. D.	445	52	07/25/1995
	US-5,792,522	08/11/1998	Jin, S. , et al.	427	575	09/18/1996
	US-5,792,706	08/11/1998	Michael, M. W., et al.	438	626	06/05/1996
	US-5,801,098	09/01/1998	Fiordalice, R. , et al.	438	653	09/03/1996
	US-5,814,557	09/29/1998	Venkatraman, Ramnath , et al.	438	622	05/20/1996
	US-5,821,168	10/13/1998	Jain, Ajay	438	692	07/16/1997
	US-5,824,599	10/20/1998	Schacham-Diamond, Yosef , et al.	438	678	01/16/1996
	US-5,852,871	12/29/1998	Khandros, I. Y.	29	843	12/11/1995
	US-5,858,877	01/12/1999	Dennison, C. H., et al.	438	700	01/21/1997
	US-5,880,018	03/01/1999	Boeck, Bruce A., et al.	438	619	
	US-5,891,797	04/06/1999	Farrar, P. A.	438	619	10/20/1997
	US-5,891,804	04/06/1999	Havemann, R. H., et al.	438	674	04/14/1997
	US-5,893,752	04/13/1999	Zhang, J. , et al.	438	687	12/22/1997
	US-5,895,740	04/20/1999	Chien, Rong-Wu , et al.	430	313	11/13/1996
	US-5,897,370	04/27/1999	Joshi, R. V., et al.	438	632	10/28/1996
	US-5,900,668	05/04/1999	Wollesen, D. L.	257	522	11/30/1995
	US-5,907,772	05/25/1999	Iwasaki, Haruo	438	253	02/26/1997
	US-5,911,113	06/08/1999	Yao, G. , et al.	438	649	03/18/1997
	US-5,913,147	06/15/1999	Dubin, Valery , et al.	438	687	01/21/1997
	US-5,925,930	07/20/1999	Farnworth, Warren M., et al.	257	737	05/21/1996
	US-5,930,596	07/27/1999	Klose, H. , et al.	438	98	03/07/1995
	US-5,930,669	07/27/1999	Uzoh, Cyprian	438	627	04/03/1997
	US-5,932,928	08/03/1999	Clampitt, D. A.	257	758	07/03/1997
	US-5,933,758	08/03/1999	Jain, A.	438	687	05/12/1997
	US-5,940,733	08/17/1999	Beinglass, Israel , et al.	438	655	07/29/1997
	US-5,948,467	09/07/1999	Nguyen, T. , et al.	427	99	07/24/1998
	US-5,962,923	10/05/1999	Xu, Z. , et al.	257	774	08/07/1995
	US-5,968,333	10/19/1999	Nogami, T. , et al.	205	184	04/07/1998
	US-5,969,422	10/19/1999	Ting, C. , et al.	257	762	05/15/1997
	US-5,972,179	10/26/1999	Chittipeddi, , et al.	204	192.17	09/30/1997
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EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)

Complete if Known

Application Number	Unknown
Filing Date	Even Date Herewith
First Named Inventor	Ahn, Kie
Group Art Unit	Unknown
Examiner Name	Unknown

Sheet 5 of 13

Attorney Docket No: 303.686US3

	US-5,981,350	11/09/1999	Geusic, Joseph E., et al.	438	386	05/29/1998
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	US-5,989,623	11/23/1999	Chen, Liang-Yuh, et al.	427	97	08/19/1997
	US-5,994,776	11/30/1999	Fang, Peng, et al.	257	758	04/20/1998
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	US-6,001,730	12/14/1999	Farkas, J., et al.	438	627	10/20/1997
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	US-6,008,117	12/28/1999	Hong, Qi-Zhong, et al.	438	629	03/19/1997
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EXAMINER

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Application Number	Unknown
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First Named Inventor	Ahn, Kie
Group Art Unit	Unknown
Examiner Name	Unknown

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
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Application Number	Unknown
Filing Date	Even Date Herewith
First Named Inventor	Ahn, Kie
Group Art Unit	Unknown
Examiner Name	Unknown

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